From BLC 11 “How I teach using data from the primary literature”

(from notes given to Ruth at the workshop; separate from workshop idea products)

Kathy Sparace sparac@clemson.edu Chargoff’s table of data

Allison Silveus allison-silveus@tccd.edu

Students in my class get into groups based upon desired career fields and find primary literature on a topic that interests them. At the end of the semester may present the work to the class in teams of 2-4. The best project is awarded the National Geographic kit.

Angela Hodgson angela.hodgson@ndsu.edu

I have my students read the methods section and draw a diagram that demonstrates the important elements of experimental design--dependent & independent variables, replication, controls, controlling as many variables in the experimental design as possible.

Bill Wischusen

Have students take figure or data from the primary literature and re-design them for use by the general public or Intro Bio textbooks. This would focus them on what are the important parts in its data as well as show them how the textbook figures have been smoothed.

Eileen Gregory egregory@rollins.edu

(1) Use article like Jevanandam paper in Biology Letters. Show students Results paragraph. Then show 4 graphs and ask which best represents results. (2) Use highlighting function of Learning Catalytics. Give them intro from paper and have them highlight hypothesis; Give them materials & Methods and have them highlight, independent variable, dependent variable, controls, etc.

Jennifer Osterhage Jennifer.osterhage@uky.edu

I haven’t actually done this yet, but thought about it today. Mastering Biology has a link ( & assessment questions) to a NY Times article about speciation in field mice. My plan is to have students complete the MBactivity (read the NY Times article) before class In class, we can investigate a figure from the original primary literature article using Ruth’s suggestions. Then, students would develop questions for the author.

David Knochel David.Knochel@ucdenver.edu

I use video clips (such as those from author’s home page, or NPR Science Friday) to broadly introduce ascience concept. I then talk about the science & paper behind the scenes, and break down figuresmethods from there. Grasping introductory students’ attention from the beginning seems to be key; it makes it more accessible.

Brian Gibbens gibb0098@umn.edu

Powerpoint slides attached “Thinking Like a Scientist”

Jung Choi jung.choi@biology.gatech.edu

Using Karpicke & Blunt's Science paper on Retrieval Practice, as a first-week of class unit on both study skills and process of science. Biol1510A.ProcessofScience.PDF attached.